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# VAPOR RECOVERY

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2004 Edition

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**VAPOR RECOVERY PROGRAM**

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**California Health and Safety Code  
Sections 41950-41962  
VAPOR RECOVERY**

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## **HEALTH AND SAFETY CODE**

### **SECTION 41950-41962**

**41950.** (a) Except as provided in subdivisions (b) and (e), no person shall install or maintain any stationary gasoline tank with a capacity of 250 gallons or more which is not equipped for loading through a permanent submerged fill pipe, unless such tank is a pressure tank as described in Section 41951, or is equipped with a vapor recovery system as described in Section 41952 or with a floating roof as described in Section 41953, or unless such tank is equipped with other apparatus of equal efficiency which has been approved by the air pollution control officer in whose district the tank is located.

(b) Subdivision (a) shall not apply to any stationary tanks installed prior to December 31, 1970.

(c) For the purpose of this section, "gasoline" means any petroleum distillate having a Reid vapor pressure of four pounds or greater.

(d) For the purpose of this section, "submerged fill pipe" means any fill pipe which has its discharge opening entirely submerged when the liquid level is six inches above the bottom of the tank. "Submerged fill pipe," when applied to a tank which is loaded from the side, means any fill pipe which has its discharge opening entirely submerged when the liquid level is 18 inches above the bottom of the tank.

(e) Subdivision (a) shall not apply to any stationary tank which is used primarily for the fueling of implements of husbandry.

**41951.** A "pressure tank" is a tank which maintains working pressure sufficient at all times to prevent hydrocarbon vapor or gas loss to the atmosphere.

**41952.** A "vapor recovery system" consists of a vapor gathering system capable of collecting the hydrocarbon vapors and gases discharged and a vapor disposal system capable of processing such hydrocarbon vapors and gases so as to prevent their emission into the atmosphere, with all tank gauging and sampling devices gastight except when gauging or sampling is taking place.

**41953.** A "floating roof" consists of a pontoon-type or double-deck-type roof, resting on the surface of the liquid contents and equipped with a closure seal, or seals, to close the space between the roof edge and tank wall. The control equipment required by this section shall not be used if the gasoline or petroleum distillate has a vapor pressure of 11.0 pounds per square inch absolute or greater under actual storage conditions. All tank gauging and sampling devices shall be gastight except when gauging or sampling is taking place.

**41954.** (a) The state board shall adopt procedures for determining the compliance of any system designed for the control of gasoline vapor emissions during gasoline marketing operations, including storage and transfer operations, with performance standards that are reasonable and necessary to achieve or maintain any applicable ambient air quality standard.

(b) The state board shall, after a public hearing, adopt additional performance standards that are reasonable and necessary to ensure that systems for the control of gasoline vapors resulting from motor vehicle fueling operations do not cause excessive gasoline liquid spillage and excessive evaporative emissions from liquid retained in the dispensing nozzle or vapor return hose between refueling events, when used in a proper manner. To the maximum

extent practicable, the additional performance standards shall allow flexibility in the design of gasoline vapor recovery systems and their components.

(c) (1) The state board shall certify, in cooperation with the districts, only those gasoline vapor control systems that it determines will meet the following requirements, if properly installed and maintained:

(A) The systems will meet the requirements of subdivision (a).

(B) With respect to any system designed to control gasoline vapors during vehicle refueling, that system, based on an engineering evaluation of that system's component qualities, design, and test performance, can be expected, with a high degree of certainty, to comply with that system's certification conditions over the warranty period specified by the board.

(C) With respect to any system designed to control gasoline vapors during vehicle refueling, that system shall be compatible with vehicles equipped with onboard refueling vapor recovery (ORVR) systems.

(2) The state board shall enumerate the specifications used for issuing the certification. After a system has been certified, if circumstances beyond the control of the state board cause the system to no longer meet the required specifications or standards, the state board shall revoke or modify the certification.

(d) The state board shall test, or contract for testing, gasoline vapor control systems for the purpose of determining whether those systems may be certified.

(e) The state board shall charge a reasonable fee for certification, not to exceed its actual costs therefor. Payment of the fee shall be a condition of certification.

(f) No person shall offer for sale, sell, or install any new or rebuilt gasoline vapor control system, or any component of the system, unless the system or component has been certified by the state board and is clearly identified by a permanent identification of the certified manufacturer or rebuilder.

(g) (1) Except as authorized by other provisions of law and except as provided in this subdivision, no district may adopt, after July 1, 1995, stricter procedures or performance standards than those adopted by the state board pursuant to subdivision (a), and no district may enforce any of those stricter procedures or performance standards.

(2) Any stricter procedures or performance standards shall not require the retrofitting, removal, or replacement of any existing system, which is installed and operating in compliance with applicable requirements, within four years from the effective date of those procedures or performance standards, except that existing requirements for retrofitting, removal, or replacement of nozzles with nozzles containing vapor-check valves may be enforced commencing July 1, 1998.

(3) Any stricter procedures or performance standards shall not be implemented until at least two systems meeting the stricter performance standards have been certified by the state board.

(4) If the certification of a gasoline vapor control system, or a component thereof, is revoked or modified, no district shall require a currently installed system, or component thereof, to be removed for a period of four years from the date of revocation or modification.

(h) No district shall require the use of test procedures for testing the performance of a gasoline vapor control system unless those test procedures have been adopted by the state board or have been determined by the state board to be equivalent to those adopted by the state board, except that test procedures used by a district prior to January 1, 1996, may continue to be used until January 1, 1998, without state board approval.

(i) With respect to those vapor control systems subject to certification by the state board, there shall be no criminal or civil proceedings commenced or maintained for failure to comply with any statute, rule, or regulation requiring a specified vapor recovery efficiency if the vapor control equipment which has been installed to comply with applicable vapor recovery requirements meets both of the following requirements:

(1) Has been certified by the state board at an efficiency or emission factor required by applicable statutes, rules, or regulations.

(2) Is installed, operated, and maintained in accordance with the requirements set forth in the document certification and the instructions of the equipment manufacturer.

**41955.** Prior to state board certification of a gasoline vapor control system pursuant to Section 41954, the manufacturer of the system shall submit the system to, or, if appropriate, the components of the system as requested by, the Division of Measurement Standards of the Department of Food and Agriculture and the State Fire Marshal for their certification.

**41956.** (a) As soon as possible after the effective date of this section, the State Fire Marshal and the Division of Measurement Standards, after consulting with the state board, shall adopt rules and regulations for the certification of gasoline vapor control systems and components thereof.

(b) The State Fire Marshal shall be the only agency responsible for determining whether any component or system creates a fire hazard. The division shall be the only agency responsible for the measurement accuracy aspects, including gasoline recirculation of any component or system.

(c) Within 120 days after the effective date of this subdivision, the Division of Measurement Standards, shall, after public hearing, adopt rules and regulations containing additional performance standards and standardized certification and compliance test procedures which are reasonable and necessary to prevent gasoline recirculation in systems for the control of gasoline vapors resulting from motor vehicle fueling operations.

**41956.1.** (a) Whenever the state board, the Division of Measurement Standards of the Department of Food and Agriculture, or the State Fire Marshal revises performance or certification standards or revokes a certification, any systems or any system components certified under procedures in effect prior to the adoption of revised standards or the revocation of the certification and installed prior to the effective date of the revised standards or revocation may continue to be used in gasoline marketing operations for a period of four years after the effective date of the revised standards or the revocation of the certification. However, all necessary repair or replacement parts or components shall be certified.

(b) Notwithstanding subdivision (a), whenever the State Fire Marshal determines that a system or a system component creates a hazard to public health and welfare, the State Fire Marshal may prevent use of the particular system or component.

(c) Notwithstanding subdivision (a), the Division of Measurement Standards may prohibit the use of any system or any system component if it determines on the basis of test procedures adopted pursuant to subdivision (c) of Section 41956, that use of the system or component will result in gasoline recirculation.

**41957.** The Division of Occupational Safety and Health of the Department of Industrial Relations is the only agency responsible for determining whether any gasoline vapor control system, or component thereof, creates a safety hazard other than a fire hazard. If the division determines that a system, or component thereof, creates a safety hazard other than a fire hazard, that system or component may not be used until the division has certified that the system or component, as the case may be, does not create that hazard.

The division, in consultation with the state board, shall adopt the necessary rules and regulations for the certification if the certification is required.

**41958.** To the maximum extent practicable, the rules and regulations adopted pursuant to Sections 41956 and 41957 shall allow flexibility in the design of gasoline vapor control systems and their components. The rules and regulations shall set forth the performance standards as to safety and measurement accuracy and the minimum procedures to be followed in testing the system or component for compliance with the performance standards. The State Fire Marshal, the Division of Occupational Safety and Health, and the Division of Measurement Standards shall certify any system or component which complies with their adopted rules and regulations. Any one of the state agencies may certify a system or component on the basis of results of tests performed by any entity retained by the manufacturer of the system or component or by the state agency. The requirements for the certification of a system or component shall not require that it be tested, approved, or listed by any private entity, except that certification testing regarding recirculation of gasoline shall include testing by an independent testing laboratory.

**41959.** Certification testing of gasoline vapor control systems and their components by the state board, the State Fire Marshal, the Division of Measurement Standards, and the Division of Occupational Safety and Health may be conducted simultaneously.

**41960.** (a) Certification of a gasoline vapor recovery system for safety and measurement accuracy by the State Fire Marshal and the Division of Measurement Standards and, if necessary, by the Division of Occupational Safety and Health shall permit its installation wherever required in the state, if the system is also certified by the state board.

(b) Except as otherwise provided in subdivision (g) of Section 41954, no local or regional authority shall prohibit the installation of a certified system without obtaining concurrence from the state agency responsible for the aspects of the system which the local or regional authority disapproves.

**41960.1.** (a) All vapor control systems for the control of gasoline vapors resulting from motor vehicle fueling operations shall be operated in accordance with the applicable standards established by the State Fire Marshal or the Division of Measurement Standards pursuant to Sections 41956 to 41958, inclusive.

(b) When a sealer or any authorized employee of the Division of Measurement Standards determines, on the basis of applicable test procedures of the division, adopted after public hearing, that an individual system or component for the control of gasoline vapors

resulting from motor vehicle fueling operations does not meet the applicable standards established by the Division of Measurement Standards, he or she shall take the appropriate action specified in Section 12506 of the Business and Professions Code.

(c) When a deputy State Fire Marshal or any authorized employee of a fire district or local or regional firefighting agency determines that a component of a system for the control of gasoline vapors resulting from motor vehicle fueling operations does not meet the applicable standards established by the State Fire Marshal, he or she shall mark the component "out of order." No person shall use or permit the use of the component until the component has been repaired, replaced, or adjusted, as necessary, and either the component has been inspected by a representative of the agency employing the person originally marking the component, or the person using or permitting use of the component has been expressly authorized by the agency to use the component pending reinspection.

**41960.2.** (a) All installed systems for the control of gasoline vapors resulting from motor vehicle fueling operations shall be maintained in good working order in accordance with the manufacturer's specifications of the system certified pursuant to Section 41954.

(b) Whenever a gasoline vapor recovery control system is repaired or rebuilt by someone other than the original manufacturer or its authorized representative, the person shall permanently affix a plate to the vapor recovery control system that identifies the repairer or rebuilder and specifies that only certified equipment was used. In addition, a rebuilder of a vapor control system shall remove any identification of the original manufacturer if the removal does not affect the continued safety or performance of the vapor control system.

(c) (1) The executive officer of the state board shall identify and list equipment defects in systems for the control of gasoline vapors resulting from motor vehicle fueling operations that substantially impair the effectiveness of the systems in reducing air contaminants. The defects shall be identified and listed for each certified system and shall be specified in the applicable certification documents for each system.

(2) On or before January 1, 2001, and at least once every three years thereafter, the list required to be prepared pursuant to paragraph (1) shall be reviewed by the executive officer at a public workshop to determine whether the list requires an update to reflect changes in equipment technology or performance.

(3) Notwithstanding the timeframes for the executive officer's review of the list, as specified in paragraph (2), the executive officer may initiate a public review of the list upon a written request that demonstrates, to the satisfaction of the executive officer, the need for such a review. If the executive officer determines that an update is required, the update shall be completed no later than 12 months after the date of the determination.

(d) When a district determines that a component contains a defect specified pursuant to subdivision (c), the district shall mark the component "Out of Order." No person shall use or permit the use of the component until the component has been repaired, replaced, or adjusted, as necessary, and the district has reinspected the component or has authorized use of the component pending reinspection.

(e) Where a district determines that a component is not in good working order but does not contain a defect specified pursuant to subdivision (c), the district shall provide the operator with a notice specifying the basis on which the component is not in good working order. If, within seven days, the operator provides the district with adequate evidence that the component is in good working order, the operator shall not be subject to liability under this division.

**41960.3.** (a) Each district which requires the installation of systems for the control of gasoline vapors resulting from motor vehicle fueling operations shall establish a toll free telephone number for use by the public in reporting problems experienced with the systems. Districts within an air basin or adjacent air basin may enter into a cooperative program to implement this requirement. All complaints received by a district shall be recorded on a standardized form which shall be established by the state board, in consultation with districts, the State Fire Marshal, and the Division of Measurement Standards in the Department of Food and Agriculture.

The operating instructions required by Section 41960.4 shall be posted at all service stations at which systems for the control of gasoline vapors resulting from motor vehicle fueling operations are installed and shall include a prominent display of the toll free telephone number for complaints in the district in which the station is located.

(b) Upon receipt of each complaint, the district shall diligently either investigate the complaint or refer the complaint for investigation by the state or local agency which properly has jurisdiction over the primary subject of the complaint. When the investigation has been completed, the investigating agency shall take such remedial action as is appropriate and shall advise the complainant of the findings and disposition of the investigation. A copy of the complaint and response to the complaint shall be forwarded to the state board.

**41960.4.** The operator of each service station utilizing a system for the control of gasoline vapors resulting from motor vehicle fueling operations shall conspicuously post operating instructions for the system in the gasoline dispensing area. The instructions shall clearly describe how to fuel vehicles correctly with vapor recovery nozzles utilized at the station and shall include a warning that repeated attempts to continue dispensing, after the system having indicated that the vehicle fuel tank is full, may result in spillage or recirculation of gasoline.

**41960.5.** (a) No retailer, as defined in Section 20999 of the Business and Professions Code, shall allow the operation of any gasoline pump from which leaded gasoline is dispensed, or which is labeled as providing leaded gasoline, unless the pump is equipped with a nozzle spout meeting the required specifications for leaded gasoline nozzle spouts set forth in Title 40, Code of Federal Regulations, Section 80.22(f)(1).

(b) For the purpose of this section, "leaded gasoline" means gasoline which is produced with the use of any lead additive or which contains more than 0.05 gram of lead per gallon or more than 0.005 gram of phosphorus per gallon.

**41960.6.** (a) No retailer, as defined in subdivision (g) of Section 20999 of the Business and Professions Code, shall, on or after July 1, 1992, allow the operation of a pump, including any pump owned or operated by the state, or any county, city and county, or city, equipped with a nozzle from which gasoline or diesel fuel is dispensed, unless the nozzle is equipped with an operating hold open latch. Any hold open latch determined to be inoperative by the local fire marshal or district official shall be repaired or replaced by the retailer, within 48 hours after notification to the retailer of that determination, to avoid any applicable penalty or fine.



- (b) For purposes of this section, a "hold open latch" means any device which is an integral part of the nozzle and is manufactured specifically for the purpose of dispensing fuel without requiring the consumer's physical contact with the nozzle.
- (c) Subdivision (a) does not apply to nozzles at facilities which are primarily in operation to refuel marine vessels or aircraft.
- (d) Nothing in this section shall affect the current authority of any local fire marshal to establish and maintain fire safety provisions for his or her jurisdiction.

**41961.** The State Fire Marshal, the Division of Measurement Standards, and the Division of Occupational Safety and Health may charge a reasonable fee for certification of a gasoline vapor control system or a component thereof, not to exceed their respective estimated costs therefor. Payment of the fee may be made a condition of certification. All money collected by the State Fire Marshal pursuant to this section shall be deposited in the State Fire Marshal Licensing and Certification Fund established pursuant to Section 13137, and shall be available to the State Fire Marshal upon appropriation by the Legislature to carry out the purposes of this article.

**41962.** (a) Notwithstanding Section 34002 of the Vehicle Code, the state board shall adopt test procedures to determine the compliance of vapor recovery systems of cargo tanks on tank vehicles used to transport gasoline with vapor emission standards which are reasonable and necessary to achieve or maintain any applicable ambient air quality standard. The performance standards and test procedures adopted by the state board shall be consistent with the regulations adopted by the Commissioner of the California Highway Patrol and the State Fire Marshal pursuant to Division 14.7 (commencing with Section 34001) of the Vehicle Code.

(b) The state board may test, or contract for testing, the vapor recovery system of any cargo tank of any tank vehicle used to transport gasoline. The state board shall certify the cargo tank vapor recovery system upon its determination that the system, if properly installed and maintained, will meet the requirements of subdivision (a). The state board shall enumerate the specifications used for issuing such certification. After a cargo tank vapor recovery system has been certified, if circumstances beyond control of the state board cause the system to no longer meet the required specifications, the certification may be revoked or modified.

(c) Upon verification of certification pursuant to subdivision (b), which shall be done annually, the state board shall send a verified copy of the certification to the registered owner of the tank vehicle, which copy shall be retained in the tank vehicle as evidence of certification of its vapor recovery system. For each system certified, the state board shall issue a nontransferable and nonremovable decal to be placed on the cargo tank where the decal can be readily seen.

(d) With respect to any tank vehicle operated within a district, the state board, upon request of the district, shall send to the district, free of charge, a certified copy of the certification and test results of any cargo tank vapor recovery system on the tank vehicle.

(e) The state board may contract with the Department of the California Highway Patrol to carry out the responsibilities imposed by subdivisions (b), (c), and (d).

(f) The state board shall charge a reasonable fee for certification, not to exceed its estimated costs therefor. Payment of the fee shall be a condition of certification. The fees may be collected by the Department of the California Highway Patrol and deposited in the Motor Vehicle Account in the State Transportation Fund. The Department of the California Highway Patrol shall transfer to the Air Pollution Control Fund the amount of those fees necessary to reimburse the state board for the costs of administering the certification program.

(g) No person shall operate, or allow the operation of, a tank vehicle transporting gasoline and required to have a vapor recovery system, unless the system thereon has been certified by the state board and is installed and maintained in compliance with the state board's requirements for certification. Tank vehicles used exclusively to service gasoline storage tanks which are not required to have gasoline vapor controls are exempt from the certification requirement.

(h) Performance standards of any district for cargo tank vapor recovery systems on tank vehicles used to transport gasoline shall be identical with those adopted by the state board therefor and no district shall adopt test procedures for, or require certification of, cargo tank vapor recovery systems. No district may impose any fees on, or require any permit of, tank vehicles with vapor recovery systems. However, nothing in this section shall be construed to prohibit a district from inspecting and testing cargo tank vapor recovery systems on tank vehicles for the purposes of enforcing this section or any rule and regulation adopted hereunder that are applicable to such systems and to the loading and unloading of cargo tanks on tank vehicles.

(i) The Legislature hereby declares that the purposes of this section regarding cargo tank vapor recovery systems on tank vehicles are (1) to remove from the districts the authority to certify, except as specified in subdivision (b), such systems and to charge fees therefor, and (2) to grant such authority to the state board, which shall have the primary responsibility to assure that such systems are operated in compliance with its standards and procedures adopted pursuant to subdivision (a).

# **California Code of Regulations, Title 19**

## **Chapter 11.5**

### **Gasoline Vapor Control Systems**

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## **California Code of Regulations, Title 19**

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## Chapter 11.5. Gasoline Vapor Control Systems

### Article 1. Administration

#### **§1918. Title.**

Note: Authority cited: Section 11349.1, Government Code. Reference: Sections 41954-41961, Health and Safety Code.

#### HISTORY

1. New Subchapter 11.5 (Sections 1918-1918.84, not consecutive) filed 4-18-77 as an emergency; effective upon filing (Register 77, No. 17).
2. Repealer of Subchapter 11.5 (Sections 1918-1918.84, not consecutive) and new Subchapter 11.5 (Sections 1918-1918.84, not consecutive) filed 8-12-77 as an emergency; designated effective 8-16-77. Certificate of Compliance included (Register 77, No. 33).
3. Editorial correction (Register 77, No. 51).
4. Repealer filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

#### **§1918.1. Purpose.**

These regulations establish minimum standards of fire safety for vapor recovery systems or components.

Any protective device or devices, including but not limited to impact valves, shear sections, flame arrestors or automatic fire checks may be required in addition to the components specified in these regulations, if in the judgement of the State Fire Marshal such additional means of protection from fire and explosion are necessary.

Note: Authority cited: Section 41956, Health and Safety Code. Reference: Sections 41956 and 41958, Health and Safety Code.

#### HISTORY

1. Amendment filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

#### **§1918.2. Scope.**

These regulations shall apply to all gasoline dispensing equipment containing a gasoline vapor control system when such system is required by the California Air Resources Board or any air pollution control agency having jurisdiction. The design, construction and installation requirements of such systems shall be applied uniformly throughout the State.

Note: Authority cited: Section 41956, Health and Safety Code. Reference: Sections 41950 and 41960, Health and Safety Code.

## HISTORY

1. Amendment filed 11-13-80; effective thirtieth day thereafter (Register 80, No. 46).
2. Amendment of NOTE filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

### **§1918.3. Authority.**

Note: Authority cited: Section 11349.1, Government Code.

## HISTORY

1. Repealer filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

### **§1918.4. Validity.**

Note: Authority cited: Section 11349.1, Government Code.

## HISTORY

1. Repealer filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

### **§1918.5. Local Ordinances.**

Note: Authority cited: Section 11349.1, Government Code.

## HISTORY

1. Repealer filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

### **§1918.6. Order of Precedence.**

Note: Authority cited: Section 11349.1, Government Code.

## HISTORY

1. Repealer filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

### **§1918.7. Violations.**

Note: Authority cited: Section 11349.1, Government Code.

## HISTORY

1. Repealer filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).
- Article 2. Definitions

### **§1918.10. "A" Definitions.**

- (a) ARB. "ARB" means Air Resources Board (of California).

Note: Authority cited: Section 41956, Health and Safety Code. Reference: Sections 41954, 41950 and 41962, Health and Safety Code.

#### HISTORY

1. Renumbering and amendment of former Section 1918.10 to Section 1918.20, and renumbering and amendment of former Section 1918.20(a) to Section 1918.10 filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

#### **§1918.11. “D” Definitions.**

(a) Dispensing Device. A unit assembly approved for installation consisting of a power-operated pumping unit, strainers, metering devices, valves, dispensing outlet(s) for hoses and dispensing nozzles designed to stop the discharge of liquid automatically when the control level of the dispensing nozzle is released.

(b) Dispensing Nozzle. A regulating mechanism with spout approved for installation in conjunction with a “dispensing device” which controls the flow of gasoline into fuel tanks, and returns vapors to an underground tank.

Note: Authority cited: Section 41956, Health and Safety Code. Reference: Sections 41954, 41950 and 41962, Health and Safety Code.

#### HISTORY

1. Renumbering and amendment of former Section 1918.11 to Section 1918.21, and renumbering and amendment of former Section 1918.20(d) to Section 1918.11 filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

#### **§1918.12. “F” Definitions.**

(a) Flame Arrestor. A device approved for installation in piping carrying a flammable vapor/air mixture, to prevent flame travel beyond the point of installation of the device.

NOTE: Authority cited: Section 41956, Health and Safety Code. Reference: Sections 41956, 41950 and 41962, Health and Safety Code.

#### HISTORY

1. Renumbering and amendment of former Section 1918.12 to Section 1918.22, and renumbering and amendment of former Section 1918.20(f) to Section 1918.12 filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

#### **§1918.13. “G” Definitions.**

(a) Gasoline. See Section 41950(c), Health and Safety Code.

Note: Authority cited: Section 41956, Health and Safety Code. Reference: Sections 41956, 41950 and 41962, Health and Safety Code.

#### HISTORY

1. Renumbering and amendment of former Section 1918.13 to Section 1918.23, and renumbering and amendment of former Section 1918.20(g) to Section 1918.13 filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).



**§1918.14. “I” Definitions.**

(a) Impact Valve. A device approved for installation in piping which automatically closes by the activation of a fusible link through exposure to fire or severe physical impact, or both.

Note: Authority cited: Section 41956, Health and Safety Code. Reference: Sections 41956, 41950 and 41962, Health and Safety Code.

**HISTORY**

1. Renumbering and amendment of former Section 1918.14 to Section 1918.24, and renumbering and amendment of former Section 1918.20(i) to Section 1918.14 filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

**§1918.15. “L” Definitions.**

(a) Labeled. “Labeled” shall mean Systems or components bearing the label, symbol, or other identifying mark of a testing laboratory approved by the State Fire Marshal, or the label of the State Fire Marshal.

NOTE: Authority cited: Section 41956, Health and Safety Code. Reference: Sections 41956, 41950 and 41962, Health and Safety Code.

**HISTORY**

1. Renumbering and amendment of former Section 1918.15 to Section 1918.25, and renumbering and amendment of former Section 1918.20(l) to Section 1918.15 filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

**§1918.16. “N” Definitions.**

(a) Nozzle. See dispensing nozzle.

NOTE: Authority cited: Section 41956, Health and Safety Code. Reference: Sections 41954, 41950 and 41962, Health and Safety Code.

**HISTORY**

1. Renumbering of former Section 1918.16 to Section 1918.26, and renumbering and amendment of former Section 1918.20(n) to new Section 1918.16 filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

**§1918.17. “U” Definitions.**

(a) Uniform Fire Code. The 1982 edition of the Uniform Fire Code. Copies available from I.C.B.O., 5360 South Workman Mill Road, Whittier, CA 90601.

NOTE: Authority cited: Section 41956, Health and Safety Code. Reference: Section 41956, Health and Safety Code.

**HISTORY**

1. New section filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

**§1918.18. “V” Definitions.**

(a) Vapor Recovery System. See Section 41952, Health and Safety Code.

(b) Vapor Balance System. A system designed to capture and retain, solely by means of displacement with or without processing, gasoline vapors emitted during dispensing operations.

(c) Vapor Assist System. A system whereby mechanical and/or chemical means are used to capture and retain, with or without processing, gasoline vapors emitted during dispensing operations.

(d) Vapor Processing Unit. Vapor Processing Equipment in one contiguous unit. Vapor processing unit shall not be construed interpreted to include inline flame arrestors, inline fire checks, pressure vacuum valves, inline check valves, and dispenser flow regulators.

NOTE: Authority cited: Section 41956, Health and Safety Code. Reference: Sections 41954, 41950 and 41962, Health and Safety Code.

**HISTORY**

1. Renumbering and amendment of former Section 1918.20(v) to Section 1918.18 filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).  
Article 3. Application for Certification

**§1918.20. Application.**

(a) Original. Any manufacturer desiring the certification and listing of any gasoline vapor recovery system or component part shall submit a completed application for evaluation and certification to the State Fire Marshal on forms provided by him. Such form shall be accompanied by the fee for evaluation and certification as prescribed in Section 1918.25.

(b) Revision. Any manufacturer desiring a revision to be made to the original certified system or component shall submit a completed application for revision to the State Fire Marshal on forms provided by him. Such form shall be accompanied by the fee for evaluation and certification as prescribed in Section 1918.25.

NOTE: Authority cited: Section 41956, Health and Safety Code. Reference: Sections 41955, 41958, Health and Safety Code.

**HISTORY**

1. Renumbering and amendment of former Section 1918.20(a) to Section 1918.10, Section 1918.20(d) to Section 1918.11, Section 1918.20(f) to Section 1918.12, Section 1918.20(g) to Section 1918.13, Section 1918.20(i) to Section 1918.14, Section 1918.20(l) to Section 1918.15, Section 1918.20(n) to Section 1918.16 and Section 1918.20(v) to Section 1918.18, and renumbering and amendment of former Section 1918.10 to Section 1918.20 filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

### **§1918.21. Required Submissions for Certification.**

(a) In addition to the application and fee required by this subchapter the State Fire Marshal may require that sample specimens, taken from regular production, be submitted to him for evaluation. The State Fire Marshal may require the assembly or erection of a sample specimen for evaluation purposes. The applicant shall assume all responsibility relating to the assembly or erection of such specimen, including but not limited to the cost, liability and removal thereof. The applicant shall arrange for the removal of any specimen submitted to the State Fire Marshal or which has been assembled or erected pursuant to this section, within 60 days of notification by the State Fire Marshal. The State Fire Marshal may, at his discretion, dispose of any specimen submitted to him following the 60 day notification.

(b) Every application for evaluation and certification of a gasoline vapor recovery system or component part which is required by these regulations to be tested, shall be accompanied by a test report issued by an approved testing organization. Technical data shall be submitted with any application when required by the State Fire Marshal. Each application for an evaluation and certification of a gasoline vapor recovery system or component shall be accompanied by black-line drawings suitable for reproduction.

(c) Specimens submitted to laboratories for testing shall be from regular production. Acceptance for certification will not be considered on the basis of any examination of hand made equipment or products.

(d) The State Fire Marshal reserves the right to publish all or any part of any test report or technical data submitted to him and relating to a gasoline vapor recovery system or component. Manufacturing processes, ingredients or compounds of materials or equipment shall not be matters of public record.

NOTE: Authority cited: Section 41956, Health and Safety Code. Reference: Sections 41955 and 41958, Health and Safety Code.

### **HISTORY**

1. Renumbering and amendment of former Section 1918.11 to Section 1918.21 filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

### **§1918.22. Labels.**

(a) Every gasoline vapor recovery system or component which is certified by the State Fire Marshal, shall bear a label conforming to the provisions of this section. Labels shall be placed in a conspicuous location and shall be attached by the manufacturer during production or fabrication.

#### **Exceptions:**

(1) Systems or components which bear the label of an approved testing organization provided such organization conducts factory inspections of the material and workmanship during fabrication and assembly.

(2) Upon written request, the State Fire Marshal may exempt specified systems or components from the labeling requirement provided he finds such labeling impractical or impossible. In such cases however sufficient evidence shall be

furnished indicating the means by which said systems or components may be reasonably identified.

(b) Labels shall be of sufficient size to render all data specified thereon, clear and legible.

(c) Labels shall be of a contrasting color to the material or equipment to which it is attached.

(d) Labels shall be produced or obtained by the manufacturer and such label shall be of the following configuration:



(1) Insert in the top scroll the name and address of the manufacturer.

(2) In the first bottom scroll insert the certification number issued by the State Fire Marshal and all other data as may be specified by the State Fire Marshal dependent upon its intended use.

(3) Insert in the bottom scroll the item certified. Examples: "Flame Arrestor"-- "Impact Valve."

(e) Labels may be of any durable material and shall be attached to the certified systems or component in such a manner that any removal will cause destruction of the label.

(f) Prior to the use of any label, the manufacturer shall submit to the State Fire Marshal a sample of each label intended to be used with any certified system or component. Labels shall not be used until written approval has been received from the State Fire Marshal.

(g) No person shall attach any label conforming to the provisions of this section to any system or component which is not certified by the State Fire Marshal.

NOTE: Authority cited: Section 41956, Health and Safety Code. Reference: Sections 41958 and 41960, Health and Safety Code.

## HISTORY

1. Renumbering and amendment of former Section 1918.12 to Section 1918.22 filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

**§1918.23. Approved Testing Organization.**

(a) For the purposes of this article, an approved testing organization shall mean any person, firm, corporation or association which conforms to all of the following:

(1) Equipped or has access to facilities which are equipped to perform tests in accordance with required test procedures.

(2) Employment of personnel who are qualified for testing. Evidence of such qualifications may include persons possessing registration as a Professional Engineer.

(3) Approved by the State Fire Marshal. Persons, firms, corporations, or associations desiring approval as a testing organization may initiate a request and present to the State Fire Marshal evidence of their qualifications which in the judgment of the State Fire Marshal is sufficient to grant approval.

Approval as a testing organization shall not be granted to any person, firm, corporation, or association for the purpose of conducting tests of materials or equipment manufactured, sold, or similarly processed or handled by such person, firm, corporation or association.

NOTE: Authority cited: Section 41956, Health and Safety Code. Reference: Section 41958, Health and Safety Code.

**HISTORY**

1. Renumbering and amendment of former Section 1918.13 to Section 1918.23 filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

**§1918.24. Testing Equipment.**

(a) Testing equipment used or intended to be used to determine a gasoline vapor recovery system or component's compliance with State Fire Marshal vapor recovery requirements shall be inspected and evaluated by the State Fire Marshal to determine conformance with required conditions for such testing equipment as set forth in the appropriate test standard.

(b) All testing equipment shall be maintained in good repair devoid of any defect which would affect the certification of any system or component to be tested.

(c) Any testing organization which desires State Fire Marshal approval shall be liable for the necessary advance arrangements for all costs incurred by one representative of the State Fire Marshal in conducting any service rendered under Section (a) above.

NOTE: Authority cited: Section 41956, Health and Safety Code. Reference: Section 41958, Health and Safety Code.

**HISTORY**

1. Renumbering and amendment of former Section 1918.14 to Section 1918.24 filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

**§1918.25. Fees.**

Each application for certification shall be accompanied by fees established by this section.

(a) The fee for evaluating any system and component shall be as follows:

(1) System (with or without processing including processing equipment, i.e., incinerator, refrigeration unit, carbon canisters, electrical controls)--\$100.00.

(2) Components (flame arrestors, pressure/vacuum valves, impact valves, dispensing nozzles, automatic fire checks, and similar devices)--\$50.00.

(b) Certification Fees. The fee for certification of systems or components--\$35.00.

(c) Evaluation and certification fees shall be submitted with each application for evaluation and certification. If the system or component is not found to be in conformance with the provisions of these regulations, the certification fee will be returned to the applicant. The evaluation fee will be retained by the State Fire Marshal to offset the costs incurred for evaluation of the submitted system or component.

NOTE: Authority cited: Section 41956, Health and Safety Code. Reference: Section 41961, Health and Safety Code.

**HISTORY**

1. Renumbering and amendment of former Section 1918.15 to new Section 1918.25 filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

**§1918.26. Violations.**

No person, firm, corporation or association shall knowingly or intentionally represent any system or component as being certified by the State Fire Marshal when such system or component is not so certified.

NOTE: Authority cited: Section 41956, Health and Safety Code. Reference: Section 41958, Health and Safety Code.

**HISTORY**

1. Renumbering and amendment of former Section 1918.16 to new Section 1918.26 filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).  
Article 4. Installation--Vapor Recovery

**§1918.30. Dispensing Nozzles.**

Dispensing nozzles shall be tested in accordance with applicable provisions of this subchapter.

NOTE: Authority cited: Section 41956, Health and Safety Code. Reference: Sections 41956 and 41958, Health and Safety Code.

## HISTORY

1. Amendment filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

### **§1918.31. Vapor Check Valves.**

Vapor check valves shall be provided in the vapor return line from each dispensing outlet to prevent the discharge of vapors when the hose nozzle valve is in its normal non-dispensing position. Such vapor check valves shall be tested in accordance with applicable provisions of this subchapter.

NOTE: Authority cited: Section 41956, Health and Safety Code. Reference: Sections 41956 and 41958, Health and Safety Code.

## HISTORY

1. Amendment filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

### **§1918.32. Fuel Shut Down.**

Means shall be provided to shut down fuel dispensing in the event the vapor return line becomes blocked in any manner that can cause a forceful ejection of liquid.

NOTE: Authority cited: Section 41956, Health and Safety Code. Reference: Sections 41956 and 41958, Health and Safety Code.

## HISTORY

1. Amendment filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

### **§1918.33. Shear Sections.**

Where vapor return piping is inside the dispenser enclosure or where it may impair the effective operation of an impact valve in the liquid pipe, a shear section shall be properly installed in the vapor return piping at the base of each dispenser. Properly installed means the shear section is mounted flush (plus/minus 3/4") with the top of the surface upon which the dispenser is mounted. Shear sections shall be tested in accordance with applicable provisions of this subchapter.

NOTE: Authority cited: Section 41956, Health and Safety Code. Reference: Sections 41956 and 41958, Health and Safety Code.

## HISTORY

1. Amendment filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

#### **§1918.34. Impact Valves.**

Impact valves shall be tested in accordance with the applicable provisions of this subchapter. Impact valves shall be properly installed in all gasoline carrying piping when supplied by a remote pump and rigidly mounted at the base of each dispenser. Properly installed means that the shear section of the impact valve is mounted flush (plus/minus 3/4") with the top of the surface upon which the dispenser is mounted.

NOTE: Authority cited: Section 41956, Health and Safety Code. Reference: Sections 41956 and 41958, Health and Safety Code.

#### **HISTORY**

1. Amendment filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

#### **§1918.35. Piping.**

Piping shall comply with the following:

(a) Non-metallic piping, if used, shall be installed in accordance with the manufacturer's installation instructions.

(b) All vapor return piping and tank vents shall be installed so as to drain toward the gasoline storage tanks. There shall be no sags or traps in the vapor return piping in which any liquid may become trapped. Condensate tanks, if utilized, shall be installed and maintained so as to preclude the blocking of the vapor return lines by liquid.

(c) All vapor return and vent piping shall be provided with swing joints or any other State Fire Marshal approved connector at the base of the riser to each dispensing unit, at each tank connection, and at the base of the vent riser where it fastens to a building or other structure. When a swing joint is used in a riser containing a shear section, the riser must be rigidly supported.

(d) Tank vent pipes two inches or less in nominal inside diameter shall not be obstructed by any device unless the tank and its associated piping and other equipment is protected to limit back pressure development to less than the maximum working pressure of the tank, its associated piping and other equipment. Protection shall be afforded by the installation of one of the following approved items: Pressure/vacuum vents, rupture disks or other tank venting devices installed in the tank vent pipes.

(e) Tank vent pipes shall terminate into the open atmosphere and shall be at least 12 feet above the adjacent ground level. The outlet shall vent upward or horizontally and be located so as to eliminate the possibility of vapors accumulating or traveling to a source of ignition or entering adjacent buildings.

(f) Vent pipes from tanks storing the same class of liquids may be connected into one outlet pipe. The vapor discharge capacity of manifolded vent piping shall be sufficient to limit back pressure development to less than the maximum working pressure of tanks, associated piping and other equipment when two tanks are filled simultaneously.

(g) Vent pipes shall be adequately supported throughout their length. When they are supporting weights in addition to their own, additional supports may be required.



(h) Piping systems servicing vapor balance recovery systems, installed after September 1, 1977 shall be pneumatically tested to 75 psig. Test pressure shall be maintained for at least 30 minutes, with the system sealed, and with a pressure loss not to exceed 3 psig.

(j) When there is any indication of a leak in an existing underground storage tank or piping system, the system shall be tested in accordance with and shall meet the criteria of Section 79.605 of the 1982 Uniform Fire Code.

(k) Vapor pipes shall enter tanks only through the top of the tank. The end of vapor pipes shall not extend into the tank more than one inch. Float check valves attached to such vapor pipes may extend into the tank without distance restrictions.

NOTE: Authority cited: Section 41956, Health and Safety Code. Reference: Sections 41956 and 41958, Health and Safety Code.

#### HISTORY

1. Amendment of subsection (j) filed 11-13-80; effective thirtieth day thereafter (Register 80, No. 46).
2. Amendment filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

#### **§1918.36. Tank Openings.**

All tank openings, other than vent pipe openings, shall comply with the following:

(a) Vapor recovery openings shall be protected against vapor release by means of either a spring-loaded check valve, dry-break connection or other approved device. Combination fill and vapor recovery openings shall be protected against vapor release unless connection of the liquid delivery pipe to the fill pipe simultaneously connects the vapor recovery pipe. Tank vent pipes shall not be obstructed by any device which will allow back pressure development in the storage tanks.

(b) All connections, which are made and broken, shall be located outside of buildings at a location free from any source of ignition and at least ten feet from any building openings. Such connections shall be closed, liquid and vapor tight when not in use and each opening shall be properly identified as to its function.

(c) Separate fill pipe openings and vapor recovery openings shall be of different sizes, or the hose connection utilized shall be incompatible so as to eliminate the possibility of cross connections.

NOTE: Authority cited: Section 41956, Health and Safety Code. Reference: Sections 41956 and 41958, Health and Safety Code.

#### HISTORY

1. Amendment filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

### **§1918.37. Gasoline Storage Tanks.**

Gasoline storage tanks used in conjunction with vapor recovery systems shall comply with Sections 79.601 through 79.605 of the Uniform Fire Code, 1982 Edition.

Exceptions: Specific requirements set forth in this subchapter shall take precedence over requirements set forth in the Uniform Fire Code. See Section 1918.6.

NOTE: Authority cited: Section 41956, Health and Safety Code. Reference: Sections 41956 and 41958, Health and Safety Code.

#### **HISTORY**

1. Amendment filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

Article 4.5. Installation-Vapor Balance Systems-With Processing

NOTE: Authority cited: Section 11349.1, Government Code.

#### **HISTORY**

1. Repealer of Article 4.5 (Section 1918.40) filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

### **Article 5. Installation-Vapor Recovery Systems-With Processing**

#### **§1918.60. General.**

In addition to the requirements set forth in Article 4, Vapor Recovery Systems--With Processing shall install the following equipment and shall comply with the requirements set forth for equipment location, mounting and protection.

NOTE: Authority cited: Section 41956, Health and Safety Code. Reference: Sections 41956 and 41958, Health and Safety Code.

#### **HISTORY**

1. Repealer of former Article 5 (Sections 1918.50-1918.58), including renumbering of Section 1918.55 to Section 1918.61, and renumbering of former Article 5.5 (Sections 1918.60-1918.64) to new Article 5 (Sections 1918.60-1918.65) filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

#### **§1918.61. Flame Arrestors.**

If the operation of the system will produce a flammable mixture in the piping which will carry it to the storage tanks, an approved flame arrestor, tested in accordance with the applicable provisions of Article 7, shall be properly installed in vapor return piping between the shear section and the storage tank.

Exception: An approved automatic fire check may be installed in lieu of an approved flame arrestor.

NOTE: Authority cited: Section 41956, Health and Safety Code. Reference: Sections 41956 and 41958, Health and Safety Code.

#### HISTORY

1. Renumbering and amendment of former Section 1918.61 to Section 1918.62, and renumbering of former Section 1918.55 to Section 1918.61 filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

#### **§1918.62. Automatic Fire Checks.**

Positive means of automatic isolation of tanks may be required in vapor return piping to prevent flashback from reaching the tanks.

NOTE: Authority cited: Section 41956, Health and Safety Code. Reference: Sections 41956 and 41958, Health and Safety Code.

#### HISTORY

1. Renumbering of former Section 1918.62 to Section 1918.63, and renumbering and amendment of former Section 1918.61 to Section 1918.62 filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

#### **§1918.63. Equipment Mounting.**

Vapor processing units shall be securely mounted on concrete, masonry or structural steel supports or other noncombustible foundations.

NOTE: Authority cited: Section 41956, Health and Safety Code. Reference: Sections 41956 and 41958, Health and Safety Code.

#### HISTORY

1. Renumbering of former Section 1918.63 to Section 1918.64, and renumbering of former Section 1918.62 to Section 1918.63 filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

#### **§1918.64. Processing Equipment Location.**

(a) All ignition sources of vapor processing equipment shall be located not less than 18 inches above any tank fill opening, the top of the dispenser island, or grade, whichever is highest. The equipment shall also be located not less than 50 feet from any fuel transfer area and not less than 10 feet from the nearest building or property line which may be built upon.

Exceptions:

(1) Nothing in this section shall prohibit roof mounted equipment.

(2) When reduction of the required 50 feet clearance from the fuel transfer area is necessary, as determined by the enforcing authority, ignition sources of vapor processing units shall be installed in conformance with the following table:

<i>Clear Distance Available (Feet)</i>	<i>Required Height Above Grade (Inches)</i>
50	18
40	30
30	42
20	48

When the minimum 20 feet required distance, as specified in the above table, cannot be obtained because of site configuration a minimum height of 12 feet from any ignition source shall be provided for the equipment, or construction enclosure requirements as set forth in (c) of this section shall apply. In no instance shall any cargo tank be permitted within the minimum 20 foot clearance during delivery operations.

(b) When the processing unit location site is lower than the tan fill opening or the top of the dispenser island, the difference in elevation shall be added to the elevation requirements set forth in (a) of this section.

(c) When the required 10 foot distance to an adjacent property line which may be built upon cannot be obtained, an open-top enclosure of not less than 2-hour noncombustible fire-resistive construction which shall extend from the mounting base or slab to an elevation not less than 18 inches higher than the highest elevation of the processing equipment shall be provided on the property line side. Doors installed in the enclosure walls shall be of noncombustible construction including the door frames. Ventilation openings, except in the property line wall, shall be provided at slab level to eliminate the accumulation of flammable vapors within the enclosure as deemed necessary by the enforcing authority having jurisdiction.

(d) Where site configuration makes adherence to equipment location elevation requirements impossible or impracticable and the equipment is located below grade or within roofed enclosures, such below grade or roofed area shall be provided with mechanical ventilation providing not less than 6 complete air changes per hour at all times. All such equipment shall meet Class 1, Division 1 requirements as set forth in Part 3, Title 24, CAC.

NOTE: Authority cited: Section 41956, Health and Safety Code. Reference: Sections 41956 and 41958, Health and Safety Code.

## HISTORY

1. Renumbering and amendment of former Section 1918.64 to Section 1918.65, and renumbering of former Section 1918.63 to Section 1918.64 filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

### **§1918.65. Vapor Processing Unit Protection.**

Fences, bumper posts and other control measures, as determined by the authority having jurisdiction, shall be provided to protect vapor processing unit installations against tampering, trespassing, and vehicular traffic. The area shall be kept clear of combustible materials of any nature within 10 feet of the vapor processing unit installation unless the unit is enclosed as specified in (c) of Section 1918.64.

NOTE: Authority cited: Section 41956, Health and Safety Code. Reference: Sections 41956 and 41958, Health and Safety Code.

## HISTORY

1. Renumbering and amendment of former Section 1918.64 to Section 1918.65 filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

### **Article 6. Electrical**

#### **§1918.70. Electrical Requirements.**

(a) General. All electrical equipment and wiring shall comply with the requirements set forth in Part 3, Title 24, California Administrative Code.

(b) Emergency Pump Cut-Off. All electrically energized vapor collection equipment shall be directly connected to, and controlled by, an emergency pump cut-off switch.

(c) Cut-Off Switch Location. The emergency pump cut-off switch shall be located in a readily accessible and clearly visible location, outside of any enclosure, within 75 feet of but no closer than 15 feet to any gasoline dispenser.

(d) Labeling. The emergency pump cut-off switch shall be clearly and legibly labeled as to its function.

NOTE: Authority cited: Section 41956, Health and Safety Code. Reference: Sections 41956 and 41958, Health and Safety Code.

## HISTORY

1. Amendment filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

### **Article 7. Standards for the Certification of Gasoline Vapor Recovery Equipment**

#### **§1918.80. Scope.**

This standard article represents the minimum basic requirements for the construction and operating performance standards of gasoline vapor recovery equipment for purposes of approval and certification by the State Fire Marshal. The minimum design, construction and operating performance standards set forth herein are those deemed as necessary to provide a reasonable degree of safety from fire and explosion in conformance to the regulations adopted by the State Fire Marshal pursuant to Section 41954 through 41961, inclusive, Health and Safety Code, and when applicable shall be reported on in their entirety by approved testing laboratories.

NOTE: Authority cited: Section 41956, Health and Safety Code. Reference: Sections 41956 and 41958, Health and Safety Code.

## HISTORY

1. Amendment filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

### **§1918.81. Test Reports.**

The report shall include failure analysis engineering data, wiring diagrams, operating and maintenance manuals and photographs, together with the tests performed and the results thereof.

The reports shall include the catalog number or other readily identifiable marking, the laboratory test report number and date. Such individually tested components of a system when installed in combination with other components shall be subjected to the performance standard tests to determine their suitability for use in combination with other component parts or equipment.

NOTE: Authority cited: Section 41956, Health and Safety Code. Reference: Sections 41956 and 41958, Health and Safety Code.

### **HISTORY**

1. New NOTE filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

### **§1918.82. Equipment Standards.**

(a) General. Equipment utilized in gasoline vapor recovery shall be tested according to the requirements set forth in the following applicable standards.

(1) Flame Arrestors. Flame Arrestors to be installed in either fuel, vapor, or vent lines shall be tested in accordance with the requirements of U.L. Standard 525, available from Underwriters Laboratories, Inc., 333 Pfingsten Road, Northbrook, IL 60062, and as approved by the State Fire Marshal.

(2) Hose Nozzle Valves. Hose nozzle valves used in conjunction with gasoline vapor recovery systems shall be tested in accordance with the requirements of U.L. Standard 842, available from Underwriters Laboratories, Inc., 333 Pfingsten Road, Northbrook, IL 60062, and as approved by the State Fire Marshal.

(3) Carbon/Charcoal Canisters. Carbon/charcoal canisters utilized in gasoline vapor recovery systems shall withstand, without failure, a test pressure of plus or minus 150% of the maximum operating pressure. The canister material shall also be able to withstand temperatures created by the materials contained therein.

(4) Pressure Regulators. Gasoline vapor pressure regulators utilized in a vapor recovery system shall be approved for the intended use.

(5) Ignition Controls. Ignition controls including, but not limited to, such devices as flame detectors, flame sensors, ignition transformers, electrical control units, alarms, flame indicators, utilized as a component of a gasoline vapor recovery system shall be approved by the State Fire Marshal for its intended use.

(6) Refrigeration Units. Refrigeration units utilized in processing vapors in gasoline vapor recovery systems shall be approved for their intended use.

(7) Pressure/Vacuum Valves. Pressure/vacuum valves utilized in gasoline vapor recovery systems shall be approved by the State Fire Marshal for their intended use.

(8) Internal Explosion/Ignition Test. The processing unit shall be subjected to a series of internal explosion/ignition tests, during performance/operation safety

testing, such that ignition of an explosion air/gasoline vapor mixture occurs within the confines of the processing unit piping. The explosion shall not propagate beyond the inlet Flame Arrestor(s). The processing unit and Flame Arrestors shall provide a degree of isolation between other installation components and the processing unit, and between the processing unit and the remainder of the installation, and between the processing unit and the storage tank. The operating function of the unit, shall not be impaired as a result of such tests. Adequate sensors shall be utilized to insure that: (1) an explosive gasoline/air vapor mixture was present; (2) that an ignition of the vapor mixture did occur; and (3) that the safeguards installed in the processing unit did function.

(9) Other Equipment. Such other equipment which may be utilized in gasoline vapor control systems shall also be tested to applicable standards as may be determined necessary by the State Fire Marshal.

NOTE: Authority cited: Section 41956, Health and Safety Code. Reference: Sections 41956 and 41958, Health and Safety Code.

#### HISTORY

1. Amendment filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

#### **§1918.83. Structural Integrity.**

(a) Wind Loads. The completely assembled vapor processing unit shall be subjected to a wind loading velocity of not less than 60 MPH for a period of not less than 10 minutes. At the conclusion of this test there shall be no evidence of damage to the unit or its function.

(b) Dead Load Test. All portions of the assembled vapor processing unit, which may be stepped upon, shall be subjected to a dead load test of not less than 200 pounds. At the conclusion of such loading there shall be no evidence of damage to the unit, platform, structural frame or plumbing or their function.

NOTE: Authority cited: Section 41956, Health and Safety Code. Reference: Sections 41956 and 41958, Health and Safety Code.

#### HISTORY

1. New NOTE filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).

#### **§1918.84. Drop Test.**

The complete processing unit and its platform (base) shall be subjected to four drop tests. The drop tests shall consist of sequentially raising each side of the base not less than 6 inches and allowing the base to drop freely. The operating function of the unit shall not be impaired as the result of such tests.

NOTE: Authority cited: Section 41956, Health and Safety Code. Reference: Sections 41956 and 41958, Health and Safety Code.

#### HISTORY

1. New NOTE filed 9-27-85; effective thirtieth day thereafter (Register 85, No. 41).